

4 COMPLIANCE MONITORING

4.1 Construction Monitoring

Based on successful cap placement approaches used at other similar sites (e.g., Anchor 2001), the contractor will subdivide the 3.6-acre Deposit 1 cap area into approximately 60 grid areas, each measuring approximately 50-feet by 50-feet, to ensure cap placement quality control. The following sequence generally describes the methods for verifying the cap thickness of each layer:

- The contractor will calculate the volume or tonnage of specific material for the first two layers (e.g., coal and sand base cap) required to be placed in each capping grid, and will monitor the delivered quantity of material to each grid.
- Once the target quantity of material has been placed within the grid, a piston core will be collected at a random position within the grid to verify the cap thickness. The piston core tubing will be made of a clear polycarbonate material that allows for efficient visual identification of the layers of the cap.
- If the minimum thickness of the cap has been achieved in that grid, then the contractor will proceed to the next grid. If the minimum thickness of the cap layer is not obtained, then additional material will be placed throughout the grid and the sector re-verified through additional random piston coring. The volume or tonnage of cap material placed during subsequent cap placements will be adjusted based on the preceding core observations.

This general method will be used for the first two layers of the cap to ensure that the specified thicknesses are placed. A detailed bathymetric survey will be used to verify the armor layer thickness. Additionally, a bathymetric survey of the capping area (with each survey meeting quality control requirements used for the RI; Anchor 2005a) will be completed prior to construction (baseline condition). The piston core observations and bathymetric surveys will together provide the as-built record of cap thicknesses placed in Deposit 1. Detailed cap placement quality control plans are discussed in detail in the CQAP (Appendix B).

4.2 Long-Term Monitoring

Long-term performance and confirmation monitoring activities are scheduled to be the basis of Ecology's 5-year review of the effectiveness of the remedial action at Deposit 1.

Scheduled monitoring events will occur in Years 2 and 4 following cap construction.

Unscheduled monitoring events will occur following the occurrence of a 50-year or higher flood event. Remedial action will also be conducted at Deposit 2; however, long-term sampling and monitoring is not required in that area. The long-term physical performance monitoring of the cap surface will be conducted to verify that the cap maintains its integrity and does not substantially erode over time by natural and anthropogenic forces following construction. Confirmation monitoring of surface and subsurface sediments will also be conducted, including chemical (PCB) monitoring of the Deposit 1 cap, to verify that the 62 µg/Kg dw sediment cleanup level is maintained. Institutional controls, compliance monitoring, and contingency responses are described in the OMMP (Appendix C).

5 CONSTRUCTION SCHEDULE

Figure 7 presents a Gantt chart that depicts a likely schedule for the remedial design and remedial action activities. Figure 7 is consistent with the CD and represents Avista's best estimate of time frames, sequences, and submission dates based on the provisions of the CD. Since many of the key dates are dependent upon review and approval by Ecology or other activities (e.g., receipt of validated data), the dates in Figure 7 should not be considered firm dates.